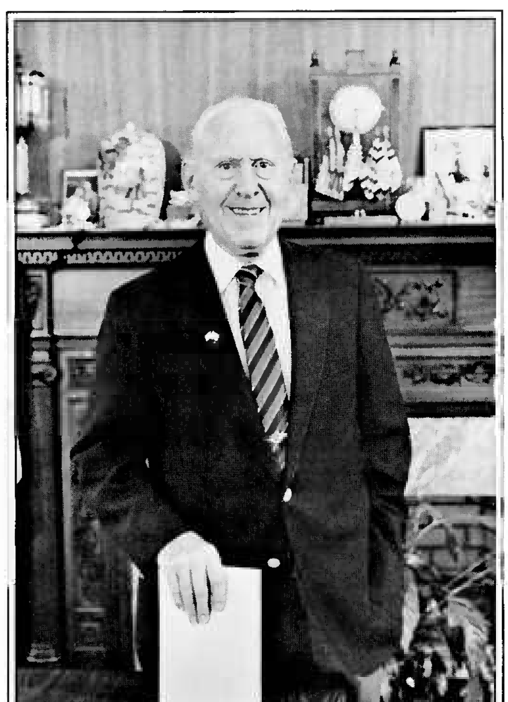
MARYLAND STATE RETIREMENT AND PENSION SYSTEMS

comprehensive annual financial report

For the year ended
June 30, 1988

Prepared by
Maryland State Retirement Agency
301 West Preston Street
Baltimore, MD 21201



Louis L. Goldstein, State Comptroller, is Chairman of the Board and a member of the Investment Committee. Mr. Goldstein has served the Systems since 1959.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS

BOARD OF TRUSTEES
301 WEST PRESTON STREET
BALTIMORE, MARYLAND 21201-2363

77 WEST STREET
ANNAPOLIS, MARYLAND 21401-2424

December 12, 1988

Dear Members and Beneficiaries:

On the following pages you will find the Comprehensive Annual Financial Report of the Board of Trustees of the Maryland State Retirement and Pension Systems. This Report consolidates the fiscal transactions and balances of the Systems for the year ended June 30, 1988. It has been prepared in accordance with Sections 159 and 161 of Article 73B of the Annotated Code of Maryland as prescribed by Statement Number 5 of the Governmental Accounting Standards Board.

All in all there are five sections:

I. Actuarial Information. This section includes the Actuary's opinion that the Systems are financially sound together with a balance sheet showing the financial condition of the Systems.

II. The Combined Financial Statements showing the fiscal transactions of the several systems and the amount of accumulated cash and securities.

III. A Description of the Benefits provided by the Systems.

IV. Investment Information. This section includes the report of the Chief Investment Officer on investment activity and recent results.

V. Statistical data with respect to participation, salaries and benefit payments.

I know you will find a great deal of interesting and valuable information in this 61st Report and I hope you will review it carefully. A supplement, which is available upon request, provides additional financial information for each of the several systems individually. With kindest regards and best wishes for continued success, good health and happiness, I am

Cordially yours,

Louis L. Goldstein

Louis L. Goldstein, Chairman
Board of Trustees
Maryland State Retirement and Pension Systems

TELEPHONE BALTIMORE (301) 225-4030 ANNAPOLIS (301) 974-3171
TOLL FREE IN MARYLAND 1-800-492-5909

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Board of Trustees

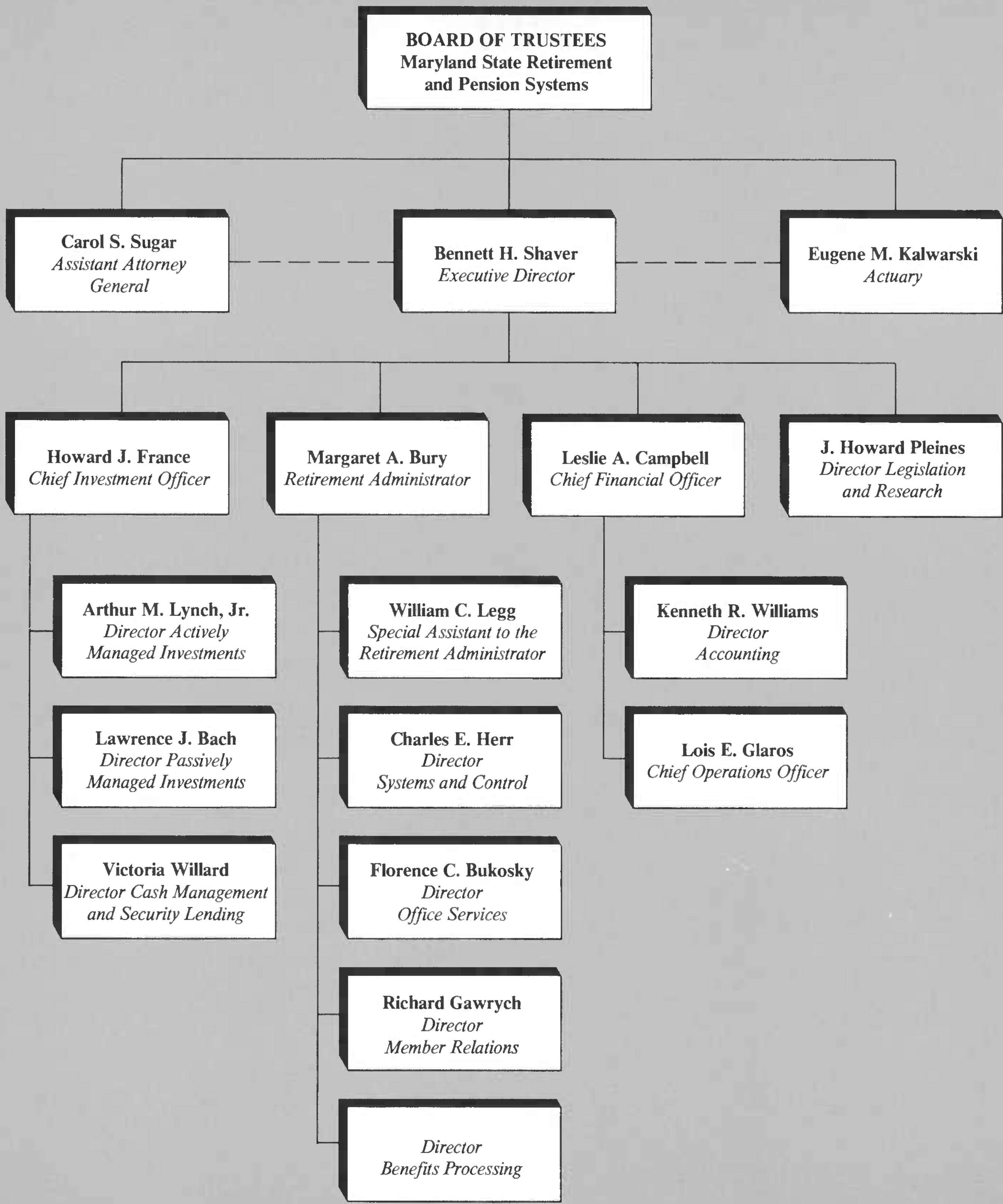
Executive Committee

Investment Committee

Lucille Maurer, State Treasurer, is both Vice-Chairman of the Board and Treasurer of the Systems. She is a member of the Executive Committee and the Investment Committee.

December, 1988

ORGANIZATION CHART
December, 1988



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Washington, D.C.

Legislative Auditor
Baltimore, Maryland

Master Custodian
First National Bank of Maryland
Baltimore, Maryland

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Thomas Lee
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Sentinel Real Estate Corporation
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Santa Monica, California

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Baltimore, Maryland

Mercantile-Safe Deposit & Trust Co.
Baltimore, Maryland

Pacific Investment Management Co.
Newport Beach, California

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Standish, Ayer & Wood, Inc.
Boston, Massachusetts

Wellington Trust Company, N.A.
Boston, Massachusetts

Richard J. Benik (left) is a beneficiary of the State Police Retirement System and a member of the Investment Committee. Homer O. Elseroad (right) is a beneficiary of the Teachers Retirement System and is Chairman of the Executive Committee.

Municipalities Participating in the Employees Systems
June 30, 1988

Allegany Community College
Allegany County Board of Education
Allegany County Commission
Allegany County Library
Allegany County Sanitary District
Allegany County Transit Authority
Annapolis, City of
Anne Arundel County Board of Education
Anne Arundel County Community College
Berlin, Town of
Brunswick, Town of
Calvert County Board of Education
Calvert County Commission
Cambridge, City of
Caroline County Board of Education
Carroll County Board of Education
Carroll County Board of Education—Cafeteria
Carroll County Public Library Employees
Cecil County Board of Education
Cecil County Commission
Charles County Community College
Chesapeake Bay Commission
Cheverly, Town of
Cresaptown Civic Improvement Association
Crisfield, City of
Crisfield Housing Authority
Cumberland, City of
Cumberland, City of—Police Department
Dorchester County Board of Education
Dorchester County Commission
Dorchester County Roads Board
Eastern Shore Regional Library
Elkton, Town of
Frederick County Board of Education
Frederick County Commission
Fruitland, City of
Garrett County Board of Education
Garrett County Board of Education—Cafeteria
Garret County Commission
Garrett County Community Action Committee
Garrett County Roads Board
Greenbelt, City of
Hagerstown, City of
Hagerstown Junior College
Harford Community College
Harford County Board of Education
Harford County Government
Housing Authority of Cambridge
Howard Community College
Howard County Board of Education
Howard County Government
Hurlock, Town of
Hyattsville, City of
Lower Shore Private Industry Council
Manchester, Town of
Maryland Food Center Authority
Maryland Health and Higher Education Facilities Authority
Maryland Higher Education Supplemental Loan Authority
Metropolitan Transit Authority
Middletown, Town of
Montgomery College
Mount Rainier, City of
New Carrollton, City of
Northeast Maryland Waste Disposal Authority
Pocomoke City
Preston, Town of
Prince George's Community College
Prince George's County Board of Education
Prince George's County Crossing Guards
Prince George's County Government
Prince George's County Memorial Library
Queen Anne's County Board of Education
Queen Anne's County Commission
Queen Anne's County Roads Board
Regional Educational Service Agency of Appalachian Maryland
Regional Planning Council
Saint Mary's County Board of Education
Saint Mary's County Commission
Saint Mary's Nursing Home
Salisbury, City of
Shore Up!
Snow Hill, Town of
Somerset County Board of Education
Somerset County Commission
Somerset County Sanitary District, Inc.
Southern Maryland Tri-County Community Action Committee
Takoma Park, City of
Talbot County Board of Education
Talbot County Council
Upper Marlboro, Town of
Walkersville, Town of
Washington County Board of Education
Washington County Library
Westminster, City of
Worcester County Board of Education
Worcester County Commission
Worcester County Liquor Board
Wor-Wic Tech Community College

MARYLAND STATE RETIREMENT AGENCY

BENNETT H. SHAVER
EXECUTIVE DIRECTOR

301 WEST PRESTON STREET
BALTIMORE, MARYLAND 21201-2363
TELEPHONE (301) 225-4051

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ANNAPOLIS, MARYLAND 21401-2424
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Executive Director's Report

During fiscal 1988, the fifteen member Board of Trustees of the Maryland State Retirement and Pension Systems together with the 102 employees of the Maryland State Retirement Agency continued to labor diligently on behalf of the 222,467 members and beneficiaries. As a consequence, the Systems have never been in stronger financial condition and, once again, the Systems have grown in absolute value in nearly every category. Of particular note are the following:

1. Perhaps one of the most important items to members is the payment of benefits. The Systems paid out almost half a billion dollars in benefit payments and expenses in 1988, up 5.3% from 1987. Payments were increased by 3.6% for the Retirement Systems and 3.0% for the Pension Systems in July of 1987 in accordance with the Systems' various cost of living adjustment formulas.

2. In 1988, employer contributions climbed in dollar terms to $576.8 million as compared to $539.3 in the year before. However as a percentage of payroll, the Systems' overall composite rate dropped from 15.64% at June 30, 1987 (applicable to fiscal 1989 appropriations) to 14.24% at June 30, 1988 (applicable to 1990 appropriations). This downward trend has continued for several years and is a measure of the effectiveness of the Board of Trustees' constant efforts to ensure a contribution rate that both meets the statutory requirement that the rate remain level and at the same time fulfills the Board's stewardship responsibilities. The Board strives to obtain the best investment result possible while minimizing investment risk.

3. Employee contributions rose slightly from $105.3 million to $106.6 million as general increases in salaries offset decreases in contributory membership.

4. The Board's investment program was the success story of 1988. As reported extensively in the national press, the Board authorized the sale of common stock valued at $2.3 billion in September of 1987, just before the stock market, as measured by the Dow Jones Industrial Average, dropped almost 30% within the span of a few days.

As a result, the Systems were insulated from almost $700.0 million of capital losses that would have occurred had the sale not taken place. In addition, however, the Board concurrently authorized the establishment of a $3.9 billion long term bond fund dedicated to the payment of retiree benefits. The interest payments and repayments of principal of the new fund are arranged to match payments to retirees in receipt of benefits on June 30, 1987.

These actions, taken together with good investment results for the balance of the year, produced a total return of 7.7% on a market value to market value basis. This not only exceeded the Board's objectives for the year but, preliminary analysis indicates, was probably the best total performance for a multi-billion dollar fund anywhere in the world.

5. Total membership jumped 6,946 from 215,521 to 222,467 at the end of 1988. Of special note is the fact that over two-thirds of the Systems' active members are now in the new pension systems. We estimate that we now serve over 10% of the population of Maryland when the dependents of our members and retirees are included.

6. The Systems' Actuary concluded his triennial experience evaluation with recommendations to strengthen (increase) liabilities for future benefits as described in his report beginning on page 3. At the same time the Actuary has recommended that the Board adopt a higher rate of interest, 7.5%, for the purpose of discounting future benefit payments. In combination, the effect of the Actuary's recommendations has been to make the valuation of Systems' liabilities and assets even more conservative, thus improving the fiscal soundness of the Systems.

7. As one statistic indicating the financial health of the Systems, the Systems' unfunded pension benefit obligation as a percentage of covered payroll now stands at 153.8% as shown on page 22. This figure, down from 226.0% in 1985, is the lowest figure since 1980 and should compare favorably with most other public programs. Generally, the smaller this figure is, the stronger the System is.

8. Finally, the organizational structure of the Systems' operations changed on July 1, 1988 as the State Retirement Agency and the State Investment Agency combined to become the new Maryland State Retirement Agency. Coordination among administrative efforts will be improved as will be operational efficiency and control. The new Agency is one of the largest enterprises in the State of Maryland, ranking within the five largest in terms of assets and at the very top when using net income as a yardstick.

In June of 1988 the Board of Trustees welcomed Joseph L. Shilling as an Ex-officio member to replace David W. Hornbeck who retired as Superintendent of the Department of Education after over 11 years of unselfish and effective membership on the Board. Mr. Hornbeck served as Chairman of the Teachers Retirement System for a number of years before the Systems were consolidated. His counsel and wisdom will be missed by all.

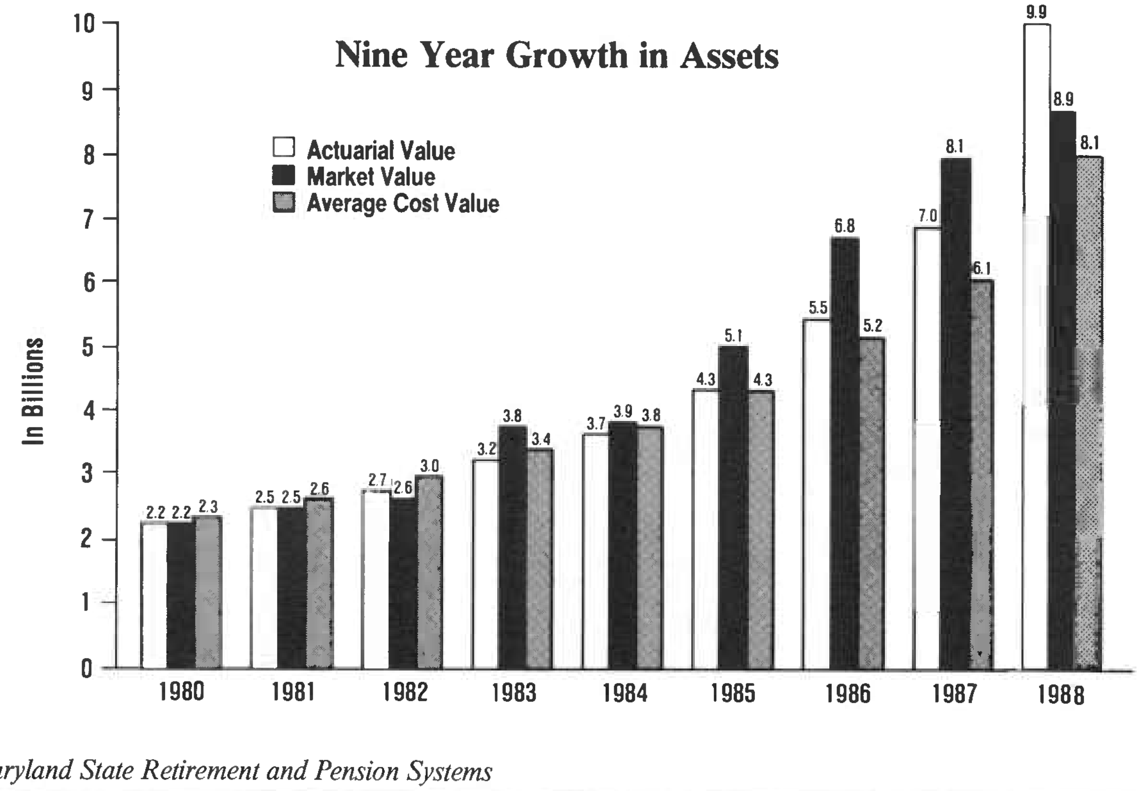
In summary, 1988 was a year of outstanding performance and great progress. The Board of Trustees and the staff of the Retirement Agency will make every effort to continue and improve on this record.

Respectfully submitted,

Bennett H. Shaver

Bennett H. Shaver, Executive Director
Maryland State Retirement and Pension Systems

December 12, 1988



MILLIMAN & ROBERTSON, INC.
CONSULTING ACTUARIES

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CHAIRMAN EMERITUS

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2445 M STREET N.W.
WASHINGTON, D.C. 20037
202/429-9760

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November 22, 1988

Board of Trustees
Maryland State Retirement
and Pension Systems
301 West Preston Street
Baltimore, MD 21201-2363

Dear Members of the Board:

At your request, we have made an actuarial valuation of the Maryland State Retirement and Pension Systems as of June 30, 1988. The results of the valuation are contained in the following report.

Overall, the experience of the Systems during the past year was very favorable. This experience was primarily influenced by two events; first, the sale of $2.3 billion of equity holdings just prior to the October 1987 "market crash"; and second, the subsequent establishment of a dedicated bond fund for system retirees. Offsetting these events to some degree was a strengthening of actuarial assumptions based upon the results of an experience study conducted on the Systems this past year. Details on these and other factors affecting the Systems' results are contained in the report which follows.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices set forth by the American Academy of Actuaries.

Respectfully submitted,

MILLIMAN & ROBERTSON, INC.

Eugene M. Kalwarski, F.S.A.
Principal

ALBANY-ATLANTA-BOSTON-CHICAGO-DALLAS-DENVER-HARTFORD-HOUSTON-INDIANAPOLIS-LOS ANGELES-MILWAUKEE-MINNEAPOLIS
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Analysis of Actuarial Liabilities and Assets

	For Fiscal Year Ended June 30, 1988	1987
Actuarial Liabilities for:		
Active Members	$ 9,083,819,565	$7,942,346,705
Retired and Disabled Members and Beneficiaries	5,791,814,195	5,786,866,093
Vested Deferred and Inactive Status Members	200,668,377	198,759,405
Total Actuarial Liability	15,076,302,136	13,927,972,203
Actuarial Value of Assets	(9,868,590,586)	(6,952,158,869)
Unfunded Actuarial Liability	$ 5,207,711,550	$6,975,813,334

Analysis of Pension Contributions Paid

	For Fiscal Year Ended June 30, 1988	1987
State of Maryland		
Employer	$ 537,983,519	$ 502,006,815
Member	100,242,442	98,826,664
Total	$ 638,225,961	$ 600,833,479
Municipal Corporations		
Employer	$ 38,782,277	$ 37,257,950
Member	6,328,335	6,436,665
Total	$ 45,110,612	$ 43,694,615
Total		
Employer	$ 576,765,796	$ 539,264,765
Member	106,570,777	105,263,329
Total	$ 683,336,573	$ 644,528,094

Actuarial Liabilities and Assets By System
As of June 30, 1988

System	Actuarial Liabilities	Actuarial Value of Assets	Unfunded Actuarial Liabilities
Teachers Retirement	$ 8,917,834,689	$ 5,107,961,827	$3,809,872,862
Teachers Pension	983,385,663	839,084,536	144,301,127
Employees Retirement	3,847,830,140	2,507,851,858	1,339,978,282
Employees Pension	832,565,037	1,003,269,154	(170,704,117)
State Police Retirement	365,631,801	365,833,220	(201,419)
Judges Retirement	129,054,806	44,589,991	84,464,815
Total	$15,076,302,136	$ 9,868,590,586	$5,207,711,550

Actuarial Present Value of Pension Benefit Obligation
As of June 30, 1988

Pension Benefit Obligation for:	Total	Teachers Retirement & Pension Systems	Employees Retirement & Pension Systems*	State Police Retirement System
Active Members	$ 8,150,093,781	$5,507,173,352	$2,398,069,051	$244,851,378
Participants currently Receiving Payments	5,791,814,195	3,701,038,831	1,957,387,404	133,387,960
Former Vested Members	200,668,377	123,367,200	76,120,272	1,180,905
Total	14,142,576,353	9,331,579,383	4,431,576,727	379,420,243
Less: Net Assets at Cost Value	8,119,719,662	4,835,869,342	2,971,259,962	312,590,358
Unfunded Pension Benefit Obligation	$ 6,022,856,691	$4,495,710,041	$1,460,316,765	$ 66,829,885

The actuarial present value of the pension benefit obligation displayed above is calculated in accordance with Governmental Accounting Standards Board Statement Number 5 which specifies that this present value should be computed projecting salaries to retirement.

*Includes Judicial Plan and Legislative Plan participants.

A. Actuarial Review and Comments

1. *Assets and Liabilities*

As of June 30, 1988 the combined Systems have total actuarial liabilities of $15.1 billion as compared to $14.0 billion last year. Against these liabilities, the Systems have present funds, when measured on an actuarial basis (5 year smoothing average), of $9.9 billion, increasing from $7.0 billion in 1987. The difference between the actuarial liabilities and the actuarial value of assets, or $5.2 billion at June 30, 1988, represents the unfunded actuarial liability as of that date. This compares to an unfunded actuarial liability of $7.0 billion as of June 30, 1987.

These assets and liability figures are based upon on-going funding assumptions and future pay projections used to determine the actuarial costs of the Systems. We examined other measures of assets and liabilities which are sometimes used by accountants when viewing the status of a retirement plan. One such measure is a comparison of the market value of assets with the present value of benefits earned to date.

As of June 30, 1988, the total present value of benefits earned to date by members of the Systems is $11.2 billion; the total market value of assets as of the same date is $8.9 billion. This results in an unfunded liability for benefits earned to date of $2.3 billion, which was also the unfunded liability at June 30, 1987.

2. *Contributions*

Contributions to the Systems are defined by the retirement law to consist of a "normal contribution" which is to cover the portion of projected liabilities accruing on account of service of members during the year following the valuation date, and an "unfunded actuarial liability contribution" which together with assets on hand is to cover the portion of projected liabilities on account of service rendered prior to the valuation date.

As determined by the valuation just completed, the total combined State employer normal contribution rate is 7.81% of the June 30, 1988 active member annualized payroll. The unfunded actuarial liability rate is 6.43% of payroll. This results in a total State contribution rate as of June 30, 1988 of 14.24.% of payroll compared with a June 30, 1987 total State rate of 15.64% of payroll.

3. *Membership*

The total membership (both active and inactive) of the Systems has increased by 3.2% from 215,521 as of June 30, 1987 to 222,467 as of June 30, 1988. The total annual payroll of active members has increased by 8.6% from $3.61 billion as of June 30, 1987 to $3.92 billion as of June 30, 1988.

4. *Overall Systems' Experience*

In this section we present highlights of the overall Systems' experience between June 30, 1987 and June 30, 1988. Specifically we present here factors causing changes in overall Systems' assets, liabilities, and contributions. These factors include:

(1) expected changes due to the passage of time;
(2) unexpected changes due to experience gains and losses;
(3) changes due to modification of assumptions and methods.

a. *Assets*

The increase in Systems' assets between June 30, 1987 and June 30, 1988, measured on an actuarial basis was $2,916 million ($2.9 billion). This total change was attributable to the following:

an increase due to Systems' investment experience	$1,818 million
an increase due to employer and member contributions	686
a decrease due to payment of Systems' benefits	(490)
increase due to method change reflecting dedicated bond fund	902
TOTAL	$2,916 million

Of this total change, $690 million was expected based upon our assumption that Systems' assets would earn 7%. However, Systems' assets actually earned about 25.79%, or an additional $1,324 million in System funds representing an actuarial gain.

b. *Liabilities*

The increase in Systems' actuarial and transitional liabilities between June 30, 1987 and June 30, 1988, was $1,164 million.

Of this total change, $894 million was expected based upon actuarial assumptions with respect to mortality, retirement, termination, disablement, cost of living increases, and salary increases. Experience during the past year did not conform exactly with the above assumptions and, as a result, an additional $391 million was added to System liabilities. The balance, or a decrease of $121 million resulted from a change in actuarial methods and assumptions effective June 30, 1988.

c. *Unfunded and Transitional Liabilities*

The net change in the Systems' unfunded actuarial and transitional liabilities between June 30, 1987 and June 30, 1988 was a decrease of $1,752 million. The components of this decrease in millions are as follows:

Expected increase in assets	$ (690) million
Expected increase in liabilities	894
Net actuarial gains	(933)
Method and assumption changes	(1,023)
TOTAL CHANGE	$(1,752) million

d. *Contributions*

The overall Systems' contribution rate has decreased by 1.40% of pay based upon a June 30, 1987 contribution rate of 15.64% and a June 30, 1988 contribution rate of 14.24%. The change in the overall Systems' contribution rate is developed as follows:

June 30, 1987 Systems' contribution rate	15.64%
Increase due to liability losses	0.40
Decrease due to investment gains	(1.28)
Decrease due to change in membership profile	(0.59)
Decrease due to method change reflecting dedicated bond fund	(1.27)
Increase due to actuarial assumption changes	1.34
June 30, 1988 Systems' contribution rate	14.24%

B. Major Actuarial Assumptions and Procedures

Valuation Interest Rate	All Systems	7.5%
Rate of Increase in COLA	Retirement Systems	5% Compound
	Pension Systems	3% Simple
	Judicial Plan	6% Compound
Annual Decrement Rates	Rates of mortality, termination of service, disablement, and retirement are based on actual experience during the period of 1974 to 1987.	
Annual Rate of Increase in Covered Compensation (Social Security)	Retirement & Pension Systems	5%
	Legislative Plan	6%

Annual Rates of Salary Increases

	Scaled by age	
	From	To
Teachers Retirement and Pension Systems	11.80%	5.94%
Employees Retirement and Pension Systems	11.22	6.17
State Police Retirement	10.03	8.00
Judicial Plan	8.00	8.00

Asset Valuation Method

All six Systems use a method based on a five-year moving average of unit market values. Under this method, an initial unit value is established and, based on that value, the starting number of units is determined. The increase in the number of units during a measurement period is determined by converting the net cash flow, excluding realized gains and losses, into additional units based on the unit value at the beginning of the next measurement period. At the end of the measurement period, the number of units is divided into the market value of the fund to determine the new unit value. The average unit value over the past five years is multiplied by the number of units available at the valuation date to determine the actuarial value of assets at the valuation date.

With the implementation of a dedicated bond fund, a method was developed for valuing these bonds which differs from the method used to value non-dedicated bonds (described above). The dedicated fund method values bonds by discounting the future income, both coupons and maturity values, to the valuation date using the same interest rate that is used to calculate the liabilities for retired members, 7.5%.

Funding Method

All six Systems use entry age normal to determine costs. Under this funding method a total contribution rate is determined which consists of two elements, the normal cost rate and the unfunded actuarial liability rate. In addition, the normal cost rate for the Teachers and Employees Systems is split into two sub-elements, the new entrant normal cost rate and the transitional liability rate.

For the Teachers Pension, Employees Pension, State Police, and Judges Systems an *individual entry age normal* cost rate is determined for a typical new entrant of each respective system. This rate is determined by taking the value, as of age at entry into the plan, of the member's projected future benefits, and dividing it by the value, also as of the member's entry age, of his expected future salary.

For members of the Teachers and Employees Retirement Systems, the new entrant normal cost rate is set at the same rate developed for the Teachers and Employees Pension Systems, respectively.

The *transitional liability* represents the excess of the present value of future normal costs determined under the Retirement System benefit provisions over the present value of future normal costs determined under the Pension System benefit provisions. The transitional rate is the level percent of active member payroll which, when applied to each year's payroll, is sufficient to amortize the transitional liability by June 30, 2020.

In addition to contributions required to meet the Systems' normal cost and transitional liability, contributions will be required to fund the Systems' *unfunded actuarial liability.* Actuarial liability is defined as the present value of future benefits less the present value of future normal costs and the transitional liability. The unfunded actuarial liability is the total of the actuarial liability for all members less the actuarial value of the Systems' assets.

If the Systems' unfunded actuarial liability is increased by *actuarial losses* or decreased by *actuarial gains,* these amounts will be included as part of the unfunded actuarial liability and funded over the remaining amortization period.

C. Actuarial Cost Methods and Assumptions

The Retirement and Pension Systems have engaged Milliman & Robertson, Inc., an independent firm of consulting actuaries, to prepare annual actuarial valuations and perform various actuarial consulting services. Significant changes in actuarial cost methods and assumptions during fiscal years 1978 to 1988 are as follows:

1. Effective for fiscal years beginning after June 30, 1979, the actuarial cost method used to determine the employees' normal and accrued liability contribution rates and the unfunded actuarial accrued liability was changed from the entry age normal cost method to the accrued benefit cost method. Effective for fiscal years beginning after June 30, 1984, the actuarial cost method was changed from the accrued benefit cost method to the entry age normal cost method.

2. The unfunded actuarial accrued liability is based on the assumption of full funding for all benefits and on certain economic assumptions. Changes in assumptions were made for the rate of annual increases in members' salaries and wages depending on the system and the member's age, and annual cost of living increase rates. Effective for fiscal years beginning after June 30, 1979, the annual rate of salary and wage increases was changed from 5% to a range of 5.39% to 11.07% depending upon the system, and the annual rate of cost of living increases was changed from 4% to 5%. Effective for fiscal years beginning after June 30, 1982, the assumed annual rate of cost of living increases was changed from 5% to a range of 3% to 6% depending upon the system.

3. Effective June 30, 1988 most actuarial assumptions were made more conservative (strengthened). Specifically, rates of salary increases and retirement were increased for all Systems; active mortality rates were lowered for the Employees Systems; withdrawal rates were lowered for the Teachers and State Police Systems. On the other hand, the interest rate used to discount future benefit payments was increased from 7.0 to 7.5% for all Systems and healthy retiree mortality rates were increased in the Employees Systems.

Joseph L. Shilling, Ex-officio member of the Board, is the State Superintendent of Education and is a member of the Executive Committee.

Division of Audits
State Office Building
Baltimore, Md. 21201
(301) 225-1400

BRUCE A. MYERS, CPA
DEPUTY
JOHN O. KENNEY, CPA
STEPHEN L. KIRCHNER, CPA
ROBERT C. KOSLOWSKI, CPA
GERALD W. MARTZ, CPA
AUDIT MANAGERS

ANTHONY J. VERDECCHIA, CPA
LEGISLATIVE AUDITOR

Board of Trustees
Maryland State Retirement
and Pension Systems

We have examined the combined financial statements of the Maryland State Retirement and Pension Systems as of and for the years ended June 30, 1988 and 1987, as listed in the Table of Contents. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the combined financial statements referred to above present fairly the financial position of the Maryland State Retirement and Pension Systems as of June 30, 1988 and 1987, and the changes in its fund balances, the results of its operations and the changes in its financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Our examinations were made for the purpose of forming an opinion on the combined financial statements taken as a whole. The combining financial statements and other supplementary information listed in the Table of Contents are presented for purposes of additional analysis and are not a required part of the combined financial statements. Such information has been subjected to the auditing procedures applied in the examinations of the combined financial statements and, in our opinion, is fairly stated in all material respects in relation to the combined financial statements taken as a whole.

Anthony J. Verdecchia

Anthony J. Verdecchia, CPA
LEGISLATIVE AUDITOR

Robert C. Koslowski

Robert C. Koslowski, CPA
AUDIT MANAGER

November 10, 1988

Combined Balance Sheet
June 30, 1988 and 1987

	June 30, 1988	June 30, 1987
Assets		
ACCOUNTS RECEIVABLE		
Employers' contributions—Note 2b	$ 8,222,410	$ 8,072,967
Members' contributions—Note 2b	1,529,912	1,690,245
Total accounts receivable	9,752,322	9,763,212
INVESTMENTS—Note 2c:		
Combined Equity Fund, at amortized cost (market value $2,841,547,125 and $4,878,419,620 at June 30, 1988 and 1987, respectively)	2,302,827,961	2,975,610,554
Combined Fixed Income Fund, at amortized cost (market value $1,608,938,081 and $3,145,577,425 at June 30, 1988 and 1987, respectively)	1,615,060,773	3,124,976,715
Combined Dedicated Fixed Investment Fund, at amortized cost (market value $4,418,511,518 at June 30, 1988)	4,181,338,005	0
Other, at cost (approximates market value)	15,623,702	38,671,122
Total investments	8,114,850,441	6,139,258,391
TOTAL ASSETS	$ 8,124,602,763	$ 6,149,021,603
Liabilities and Fund Balances		
LIABILITIES		
Administrative expenses payable	$ 3,989,772	$ 5,650,521
Refunds payable	893,329	1,766,311
Total Liabilities	4,883,101	7,416,832
FUND BALANCES		
Annuity Savings Fund — Note 2d	1,240,736,153	1,161,227,863
Retirement Accumulation Fund—Note 2e	6,878,983,509	4,980,376,908
Total fund balances	8,119,719,662	6,141,604,771
TOTAL LIABILITIES AND FUND BALANCES	$ 8,124,602,763	$ 6,149,021,603

The accompanying notes are an integral part of this financial statement.

Combined Statement of Changes in Fund Balances

For the Fiscal Years Ended June 30, 1988 and 1987

	Annuity Savings Fund —Note 2d	Retirement Accumulation Fund —Note 2e
Balances, June 30, 1986	$ 1,088,211,306	$ 4,139,032,961
Excess of revenue over expenses — Fiscal Year 1987	90,418,596	823,941,908
Transfers to the Annuity Savings Fund from the Retirement Accumulation Fund for interest credited to members' accounts	47,109,106	(47,109,106)
Transfers to the Retirement Accumulation Fund from the Annuity Savings Fund for contributions of retiring members	(64,511,145)	64,511,145
Balances, June 30, 1987	1,161,227,863	4,980,376,908
Excess of revenue over expenses — Fiscal Year 1988	94,132,952	1,883,981,939
Transfers to the Annuity Savings Fund from the Retirement Accumulation Fund for interest credited to members' accounts	50,191,541	(50,191,541)
Transfers to the Retirement Accumulation Fund from the Annuity Savings Fund for contributions of retiring members	(64,816,203)	64,816,203
Balances, June 30, 1988	$ 1,240,736,153	$ 6,878,983,509

The accompanying notes are an integral part of this financial statement.

Georgia H. Emory is a trustee appointed by the Governor to represent the general public. She is a member of the Investment Committee. Bennett H. Shaver, Secretary to the Board, is Executive Director of the Systems.

Combined Statement of Revenue and Expenses by Fund

For the Fiscal Years Ended June 30, 1988 and 1987

	Fiscal Year Ended June 30, 1988	Fiscal Year Ended June 30, 1987
ANNUITY SAVINGS FUND—Note 2d		
Revenue		
Members' contributions	**$ 106,570,777**	$ 105,263,329
Expenses		
Refunds	**12,437,825**	14,844,733
EXCESS OF REVENUE OVER EXPENSES	**$ 94,132,952**	$ 90,418,596
RETIREMENT ACCUMULATION FUND—Note 2e		
Revenue		
Employers' contributions	**$ 576,765,796**	$ 539,264,765
Investment income—Note 2c	**819,810,438**	732,068,721
Total revenue	**1,396,576,234**	1,271,333,486
Expenses		
Benefit payments	**463,474,904**	436,614,886
Administrative expenses—Note 2f	**10,918,928**	10,776,692
Total expenses	**474,393,832**	447,391,578
EXCESS OF REVENUE OVER EXPENSES BEFORE EXTRAORDINARY GAIN	**922,182,402**	823,941,908
Extraordinary gain—Note 3	**961,799,537**	0
EXCESS OF REVENUE OVER EXPENSES	**$ 1,883,981,939**	$ 823,941,908

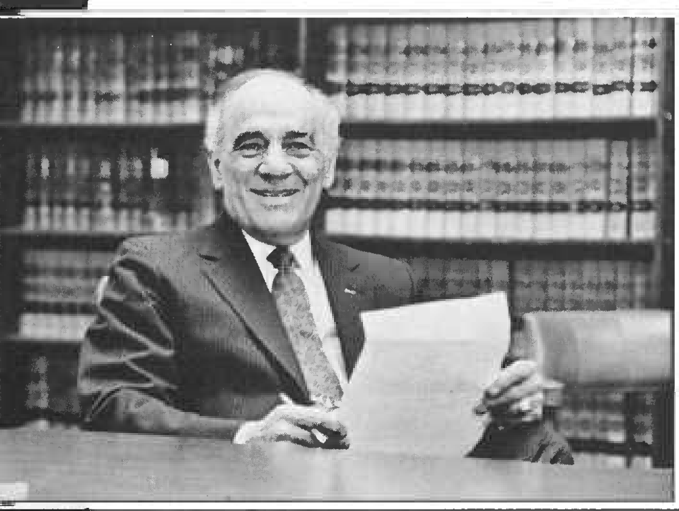
The accompanying notes are an integral part of this financial statement.

Combined Statement of Changes in Financial Position

For the Fiscal Years Ended June 30, 1988 and 1987

	Fiscal Year Ended June 30, 1988	1987
SOURCES OF FINANCIAL RESOURCES		
Excess of revenue over expenses before extraordinary gain		
Annuity Savings Fund	$ 94,132,952	$ 90,418,596
Retirement Accumulation Fund	922,182,402	823,941,908
Total excess of revenue over expenses before extraordinary gain	1,016,315,354	914,360,504
Extraordinary gain—Note 3	961,799,537	0
Total excess revenue over expenses	1,978,114,891	914,360,504
Decrease in accounts receivable	10,890	11,265,651
TOTAL SOURCES OF FINANCIAL RESOURCES	$ 1,978,125,781	$ 925,626,155
USES OF FINANCIAL RESOURCES		
Increase in investments	$ 1,975,592,050	$ 921,448,644
Decrease in liabilities	2,533,731	4,177,511
TOTAL USES OF FINANCIAL RESOURCES	$ 1,978,125,781	$ 925,626,155

The accompanying notes are an integral part of this financial statement.



Frank P. Casula is a trustee appointed by the Governor to represent the interests of local governments participating in the Employees Systems. He is a member of the Investment Committee.

Notes to Combined Financial Statements

1. GENERAL DESCRIPTION OF THE SYSTEMS

The Maryland State Retirement and Pension Systems (hereinafter referred to as the Systems) is the administrator of an agent multiple-employer public employee retirement system established by the State of Maryland to provide pension benefits for State employees and employees of participating municipal corporations within the State. The Systems is part of the State of Maryland's financial reporting entity and is included in the State's financial statements as a pension trust fund.

A detailed description of the benefits of each of the Systems begins on page 26.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. Method of Reporting

The combined financial statements of the Systems are prepared on the accrual basis of accounting.

b. Contributions Receivable

These receivables represent contributions due at June 30 from both the members and the employers, which were received in the subsequent fiscal year.

c. Investments

Article 73B, Section 161 of the Annotated Code of Maryland provides that funds may be invested by the Systems, subject to the terms, conditions, limitations, and restrictions imposed by the Board of Trustees of the Maryland State Retirement and Pension Systems. The law further provides that not more than 15 percent of the assets that are invested in common stocks may be invested in non-dividend paying common stocks. The Systems' investments are commingled in three combined investment funds, which are structured on a basis similar to that of a mutual fund. In this regard, the Combined Equity Fund consists principally of common stock, and the Combined Fixed Income Fund and the Combined Dedicated Fixed Investment Fund consists of bonds and other fixed income investments. The Combined Dedicated Fixed Investment Fund was established in October, 1987 and structured so that interest income and the proceeds from investments upon maturity would match the projected benefit payments for all retired members (excluding retirees of the participating municipalities) as of June 30, 1987. The net assets and investment income of the Combined Equity Fund and the Combined Fixed Income Fund are used to pay benefits/refunds to all retirees/members not covered by the Combined Dedicated Fixed Investment Fund. Investment income earned by the Combined Equity Fund and Combined Fixed Income Fund is distributed monthly to the systems based on each system's pro rata share of the combined investment funds' assets. Investment income earned by the Combined Dedicated Fixed Investment Fund is distributed monthly to each system based on actuarially determined percentages. The assets of the combined investment funds are carried at cost, or amortized cost when purchase premiums and discounts are involved (see following schedule). The cost of securities sold is determined using the average cost method. Admission to and withdrawal from each of the Funds is allowed only as of the close of business on the last day of each month. The combined investment funds' net assets are allocated to each system based upon percentage ownership of shares for the Combined Equity and Fixed Income Funds and actuarially determined percentages for the Combined Dedicated Fixed Investment Fund. However, certain amounts are not invested in the Funds but are held by the Systems for the purpose of meeting cash needs for the payment of benefits and refunds. In this regard, the Systems utilized temporary idle cash to purchase short-term investments of $15,623,702 at June 30, 1988 and $38,671,122 at June 30, 1987.

Net assets of the combined investment funds at June 30, 1988 and 1987 were as follows:

June 30, 1988

	Combined Equity Fund		Combined Fixed Income Fund	
	Cost	**Market Value**	**Cost**	**Market Value**
Investments:				
Bonds	$ 4,377,603	$ 3,882,390	$1,248,681,570	$1,237,621,290
Stocks	2,037,215,567	2,576,429,944	0	0
Short-term investments	221,418,212	221,418,212	178,548,146	178,548,146
Real Estate Mutual Funds	0	0	175,000,000	183,202,000
Mortgages and ground rents	0	0	26,111,687	22,847,275
Due from Systems	30,000,000	30,000,000	0	0
Accounts receivable-stock sales	10,748,281	10,748,281	0	0
Other Assets	6,485,246	6,485,246	16,719,370	16,719,370
Total Assets	2,310,244,909	2,848,964,073	1,645,060,773	1,638,938,081
Accounts Payable:				
Stock purchased	7,416,948	7,416,948	0	0
Due to Systems	0	0	30,000,000	30,000,000
Total Liabilities	7,416,948	7,416,948	30,000,000	30,000,000
Net Assets	$2,302,827,961	$2,841,547,125	$1,615,060,773	$1,608,938,081

June 30, 1987

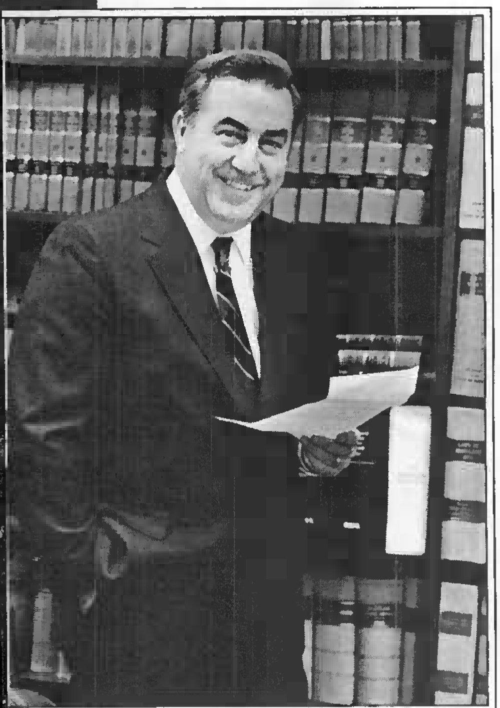
	Combined Equity Fund		Combined Fixed Income Fund	
	Cost	Market Value	Cost	Market Value
Investments:				
Bonds	$ 16,611,019	$ 18,852,380	$2,378,695,886	$2,401,903,060
Stocks	2,818,133,797	4,718,701,502	0	0
Short-term investments	217,455,683	217,455,683	512,639,491	512,639,491
Due from Combined Equity Fund	0	0	80,000,000	80,000,000
Real Estate Mutual Funds	0	0	75,000,000	76,412,078
Mortgage and ground rents	0	0	29,337,398	25,318,856
Due from Systems	0	0	7,000,000	7,000,000
Accounts receivable-stock sales	15,878,224	15,878,224	0	0
Other assets	13,812,615	13,812,615	42,303,940	42,303,940
Total Assets	3,081,891,338	4,984,700,404	3,124,976,715	3,145,577,425
Accounts Payable:				
Stock purchased	(19,280,784)	(19,280,784)	0	0
Due to Combined Fixed Income Fund	(80,000,000)	(80,000,000)	0	0
Due to Systems	(7,000,000)	(7,000,000)	0	0
Total Liabilities	(106,280,784)	(106,280,784)	0	0
Net Assets	$2,975,610,554	$4,878,419,620	$3,124,976,715	$3,145,577,425

Short-term investments consist of commercial paper and money market investments. Accounts receivable-stock sales represents receivables from brokers for stocks sold for which the proceeds had not yet been received. Accounts payable-stock purchased represents payables to brokers for stocks purchased for which payment had not yet been made.

Combined Dedicated Fixed Investment Fund	
Cost	Market Value
$3,986,017,575	$4,223,186,407
0	0
109,590,280	109,594,961
0	0
0	0
0	0
0	0
85,730,150	85,730,150
4,181,338,005	4,418,511,518
0	0
0	0
0	0
$4,181,338,005	$4,418,511,518

Arthur N. Caple, Jr., is a member of the Employees Retirement System. He is currently Executive Director of the Maryland Teachers and State Employees Supplemental Retirement Program and serves on the Board's Investment Committee.

Carl D. Lancaster (picture not available) is a member of the Teachers Retirement System and serves on the Investment Committee.



Alfred D. Johnson, Jr., is a trustee appointed by the Governor to represent the general public and serves as the Chairman of the Investment Committee.

Investments with an amortized cost of $6,892,495,048 and $5,083,993,275 at June 30, 1988 and 1987, respectively, were held by the Systems' custodian bank in the name of the Treasurer of the Board of Trustees for the Maryland State Retirement and Pension Systems. Investments with an amortized cost of $580,835,425 and $466,620,405 at June 30, 1988 and June 30, 1987, respectively, were on loan to broker-dealers. Pledged collateral having a market value of at least 102% of the market value of the loaned securities was held by the Systems' custodian bank, in the Systems' name. Other investments with an amortized cost of $403,946,967 and $267,173,908, and market value of $422,322,286 and $322,891,062 at June 30, 1988 and 1987, respectively, were held in mutual funds. These securities represent all of the Systems' investments except for money market investments with an amortized cost of $125,306,902 and $268,756,808 at June 30, 1988 and June 30, 1987, respectively.

No investment in any one organization represented 5% or more of the net assets available for pension benefits. There were no investments in, loans to, or leases with parties related to the Systems.

Investment Income

Investment income includes interest, dividends, and amortization of discounts (reduced for amortization of premiums and accrued interest paid on securities purchased). Gains and losses due to liquidation are recorded in the fiscal period in which the transaction occurs. Net income of the combined investment funds for the fiscal years ended June 30, 1988 and 1987 is as follows:

	1988		
	Combined Equity Fund	**Combined Fixed Income Fund**	**Combined Dedicated Fixed Investment Fund**
Interest:			
Bonds	**$ 643,940**	**$ 142,531,690**	**$ 204,448,535**
Short-term investments	**15,659,653**	**21,782,489**	**3,534,604**
Mortgages and ground rents	**0**	**2,059,278**	**0**
Other	**1,920,893**	**6,709,528**	**76,565,056**
Dividends	**87,256,011**	**0**	**0**
Profit (loss) on sale of investments	**238,489,023**	**(19,839,177)**	**34,478,409**
Net Investment Income	**$ 343,969,520**	**$ 153,243,808**	**$ 319,026,604**

	1987	
	Combined Equity Fund	**Combined Fixed Income Fund**
Interest:		
Bonds	$ 301,920	$ 208,007,208
Short-term investments	9,867,105	15,142,865
Mortgages and ground rents	0	2,428,117
Other	2,223,973	4,048,178
Dividends	124,280,737	0
Profit on sale of investments	335,798,388	27,967,818
Net Investment Income	$ 472,472,123	$ 257,594,186

The following is a detailed analysis of investment income:

	1988	1987
FROM COMBINED INVESTMENTS FUNDS (See preceding schedule):		
Combined Equity Fund of the Maryland State Retirement and Pension Systems' net income from investments	$ 343,969,520	$ 472,472,123
Combined Fixed Income Fund of the Maryland State Retirement and Pension Systems' net income from investments	153,243,808	257,594,186
Combined Dedicated Fixed Investment Fund of the Maryland State Retirement and Pension Systems' net income from investments	319,026,604	0
Net Investment Income From Combined Funds	816,239,932	730,066,309
INCOME FROM INVESTMENTS HELD EXCLUSIVELY BY INDIVIDUAL SYSTEMS		
Interest on short-term investments	3,570,506	2,002,412
TOTAL INVESTMENT INCOME	$ 819,810,438	$ 732,068,721

d. Annuity Savings Fund — Members' Contributions

Members' contributions together with interest thereon, at predetermined interest rates, are credited to the Annuity Savings Fund. Upon retirement, the members' accumulated contributions are transferred from the Annuity Savings Fund to the Retirement Accumulation Fund.

e. Retirement Accumulation Fund — Contributions

Contributions made by employers are credited to the Retirement Accumulation Fund. All death and retirement benefits are paid from this Fund.

f. Administrative Expenses

The operations of the Systems are centralized. The administrative expenses applicable to the Systems (e.g., salaries of the Systems' employees) were funded from investment income. The administrative expenses were charged to the individual systems based upon each system's percentage ownership in the Combined Equity Fund and the Combined Fixed Income Fund (see Combining Balance Sheet by System). Administrative expenses applicable to the Systems during fiscal years 1988 and 1987, totaled $10,918,928 and $10,776,692, respectively.

g. Reclassifications

Certain reclassifications were made to the 1987 financial statements to conform with the 1988 financial statement presentation.

3. EXTRAORDINARY GAIN

During October, 1987, the Systems established the Combined Dedicated Fixed Investment Fund. New fixed income securities were purchased so that interest income and the proceeds from the investments upon maturity would match the projected benefit payments for all retired members (excluding retirees of participating municipalities) as of June 30, 1987. Specifically, equity investments with a book value of $1,251,415,593 from the Systems' Combined Equity Fund were sold for $2,295,639,087. Furthermore, government fixed investments with a book value of $887,687,117 from the Systems' Combined Fixed Income Fund were sold for $862,123,709. In addition, a loss of $56,860,549 was incurred on certain investment transactions applicable to the establishment of the Combined Dedicated Fixed Investment Fund. All of these transactions resulted in an extraordinary gain of $961,799,537 (i.e., gain on sale of equity investment of $1,044,223,494 reduced by the loss on the sale of fixed investments of $25,563,408 and the loss of $56,860,549 on other investment transactions).

4. FUNDING STATUS AND PROGRESS

Pension benefit obligation is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date. The measure is the actuarial present value of credited projected benefits and is intended to help users assess the Systems' funding status on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among public employee retirement systems. The measure is independent of the actuarial funding method used to determine contributions to the Systems (Note 5).

The pension benefit obligation was determined as part of an actuarial valuation at June 30, 1988. Significant actuarial assumptions used include (a) a rate of return on the investment of present and future assets of 7.5 percent per year compounded annually, (b) projected salary increases from 5 to 6 percent per year compounded annually, attributable to inflation, (c) additional projected salary increases ranging from .79 percent to 6.80 percent per year, attributable to seniority/merit, and (d) postretirement benefit increase ranging from 3 percent to 6 percent per year depending on the system.

At June 30, 1988, the unfunded pension benefit obligation (i.e., pension benefit obligation less net assets available for benefits) was as follows:

Pension benefit obligation:	
Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$ 5,992,482,572
Current employees:	
Accumulated employee contributions including allocated investment income	1,240,736,155
Employer-financed vested and nonvested	6,909,357,626
Total pension benefit obligation	$14,142,576,353
Net assets available for benefits, at cost (market value is $8,889,489,647)	8,119,719,662
Unfunded pension benefit obligation	$ 6,022,856,691

Changes in actuarial assumptions which significantly affected the valuation of the pension benefit obligation occurred during fiscal year 1988.

5. CONTRIBUTIONS REQUIRED AND MADE

The State's retirement contributions are appropriated annually, based upon actuarial valuations. In this regard, the Systems has engaged an independent firm of consulting actuaries to prepare annual actuarial valuations and perform various actuarial consulting services. Effective July 1, 1980, in accordance with the law governing the Systems, all benefits of the Systems are funded in advance. The entry age normal cost method is the actuarial cost method used to determine the employers' normal and accrued liability contribution rates and the unfunded actuarial accrued liability. The entry age normal cost method is the method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the actuarial accrued liability.

Employer contributions totaling $576,765,796 for fiscal year 1988 were made in accordance with actuarially determined contribution requirements based on an actuarial valuation performed as of June 30, 1986. Employee contributions for fiscal year 1988 totaled $106,570,777. Employer contributions consisted of $246,836,209 normal cost and $329,929,587 amortization of the unfunded actuarial accrued liability.

The liquidation period for the unfunded actuarial accrued liabilities (as provided by law) is 32 years from June 30, 1988. Significant actuarial assumptions used to compute contribution requirements are the same as those used to compute the pension benefit obligation (Note 4).

The computation of the pension contribution requirements for fiscal year 1988 was based on the same actuarial assumptions, benefit provisions, actuarial funding method, and other significant factors used to determine pension contribution requirements in the previous year.

6. HISTORICAL TREND INFORMATION

Historical trend information which provides data about the Systems' progress made in accumulating sufficient assets to pay pension benefits when due is presented on pages 22 to 25.

Other Supplementary Information

1. ANALYSIS OF FUNDING PROGRESS:

Analysis of net assets available for benefits, pension benefit obligation, and unfunded pension benefit obligation in isolation can be misleading. Expressing the net assets available for benefits as a percentage of the pension benefit obligation provides one indication of the Systems' funding status on a going-concern basis. Analysis of this percentage over time indicates whether the Systems is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the system. Trends in unfunded pension benefit obligation and annual covered payroll are both affected by inflation. Expressing the unfunded pension benefit obligation as a percentage of annual covered payroll provides information regarding the effects of inflation and aids analysis of the Systems' progress in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the system. Although data relating to the Systems' pension benefit obligation was not readily available for fiscal years prior to 1980, the data was available beginning with fiscal year 1980. Information regarding the Systems' funding status for fiscal years 1980 to 1988 is as follows:

Fiscal Year	Net Assets Available for Benefits, at Cost (1)	Pension Benefit Obligation (2)	Percentage Funded (1)/(2)	Unfunded Pension Benefit Obligation (2) - (1)	Annual Covered Payroll (3)	Unfunded Pension Benefit Obligation as a Percentage of Covered Payroll (2-1)/(3)
1980	$2,409,968,596	$ 5,421,846,086	44.4%	$3,011,877,490	$2,344,019,067	128.5%
1981	2,698,543,721	7,316,740,727	36.9	4,618,197,006	2,588,881,338	178.4
1982	3,069,384,595	8,114,557,355	37.8	5,045,172,760	2,762,656,355	182.6
1983	3,429,416,507	8,738,427,342	39.2	5,309,010,835	2,802,054,508	189.5
1984	3,792,035,103	9,805,080,826	38.7	6,013,045,723	2,851,579,490	210.9
1985	4,350,115,627	11,223,098,783	38.8	6,872,983,156	3,041,340,403	226.0
1986	5,227,244,267	12,158,741,324	43.0	6,931,497,057	3,318,765,561	208.9
1987	6,141,604,771	13,170,030,576	46.6	7,028,425,805	3,606,499,969	194.9
1988	8,119,719,662	14,142,576,353	57.4	6,022,856,691	3,916,850,687	153.8

Pages 24 and 25 provide information regarding the significant changes made to the Systems during the above period.

2. REVENUES BY SOURCE AND EXPENSES BY TYPE:

Revenues

Fiscal Year	Employee Contributions	Employer Contributions	Investment Income	Total
1979	$107,359,846	$212,398,131	$ 127,772,284	$ 447,530,261
1980	107,401,321	214,447,559	159,791,435	481,640,315
1981	93,677,742	279,875,270	155,465,781	529,018,793
1982	90,788,488	298,284,687	276,185,457	665,258,632
1983	93,220,494	347,265,305	252,650,395	693,136,194
1984	89,496,359	448,435,183	199,464,305	737,395,847
1985	99,992,517	469,984,032	426,481,839	996,458,388
1986	108,183,026	514,466,439	684,619,130	1,307,268,595
1987	105,263,329	539,264,765	732,068,721	1,376,596,815
1988	106,570,777	576,765,796	1,781,609,975*	2,464,946,548

Expenses

Fiscal Year	Benefits	Administrative Expenses	Refunds	Total
1979	$156,067,921	$ 0	$ 23,811,009	$ 179,878,930
1980	179,980,849	0	157,252,687	337,233,536
1981	214,437,034	0	26,006,634	240,443,668
1982	256,631,563	2,701,666	35,084,529	294,417,758
1983	299,597,914	3,116,978	30,389,390	333,104,282
1984	338,911,944	5,910,944	29,954,363	374,777,251
1985	371,092,749	7,603,503	59,681,612	438,377,864
1986	401,035,776	10,834,869	18,269,310	430,139,955
1987	436,614,886	10,776,692	14,844,733	462,236,311
1988	463,474,904	10,918,928	12,437,825	486,831,657

Employer contributions were made in accordance with actuarially determined contribution requirements. Pages 24 and 25 provide information regarding the significant changes made to the Systems during the above period.

* Investment income includes extraordinary gain of $961,799,537.

3. SUMMARY OF SIGNIFICANT CHANGES TO THE SYSTEMS DURING FISCAL YEARS 1979 TO 1988:

Numerous changes which affect the comparability of the data presented in the other supplementary information on pages 22 and 23 have occurred. Significant changes applicable to the Systems during fiscal years 1979 to 1988 are as follows:

a. **Funding and Benefits**

Prior to fiscal year 1981, the Systems was composed of both pay-as-you-go and advance funded elements and the State's contributions were appropriated annually, based upon a report of consulting actuary. Members of the Employees and Teachers Retirement Systems were required to contribute a fixed percentage (e.g., 5%) of their regular salaries and wages and members of the State Police Retirement System were required to contribute 8% of their regular salaries and wages.

Chapters 23 and 24 of the Laws of Maryland, 1979, provided that, effective July 1, 1980, the State's contributions to the Systems be sufficient to liquidate over a period of 40 years the amount of total liabilities of the Systems based on benefits accrued to that date that are not dischargeable by the amounts to the credit of the Retirement Accumulation Fund and the Annuity Savings Fund. This legislation, which had a major impact on the funding and benefits of the Systems, provided for the following:

(1) Effective July 1, 1980, the existing retirement systems were to be fully funded and new, fully-funded pension systems were established which integrate the benefit formula with social security. Enrollment in the new systems is mandatory for all State employees (except for State correctional officers, judges and members of the Maryland General Assembly who become members of the Employees Retirement System) and teachers hired on or after January 1, 1980 and optional for existing State employees and teachers.

(2) Members of the new pension systems do not make contributions, except for that portion of each member's annual salary that is in excess of the social security wage base, for which the contribution rate for each member is 5%. A maximum of 3% per annum was established as the post-retirement cost of living increases for members of the new systems. Pension benefits for members of the new systems were reduced thereby reducing the State's funding requirements.

Chapter 7, Laws of Maryland, 1984, effective June 1, 1984, required all members of the Employees and Teachers Retirement Systems (except for State correction officers, judges and members of the Maryland General Assembly) to select one of the following four retirement options:

(1) A member could remain in the Employees or Teachers Retirement System with the same benefits then currently provided; however, members were required to contribute an additional 2% of annual salary beginning on July 1, 1984.

(2) A member could remain in the Employees or Teachers Retirement System with the same benefits then currently provided except that the annual adjustment of the member's retirement allowance for cost of living increases as reflected by the consumer price index would be limited to a maximum of 5% of the retirement allowance paid to that member during the preceding fiscal year. Under this option, members' contribution rates would not change.

(3) A member could join the Employees or Teachers Pension System effective July 1, 1984 and retain the benefits earned through June 30, 1984 under membership in the Employees or Teachers Retirement System. Upon retirement a member would receive benefits from both the Retirement and Pension Systems. Specifically, the member's retirement allowance applicable to service credit earned prior to July 1, 1984 would be calculated using the Retirement System formula and the member's retirement allowance for service credit earned after June 30, 1984 would be calculated using the Pension System formula.

(4) A member may transfer to the Employees or Teachers Pension System and receive a refund of contributions and interest.

The dollar effect of the above changes on the operating results of the Systems by fiscal years was not readily determinable.

b. **Administrative Expenses**

Prior to fiscal year 1982, the Systems was not charged for administrative expenses. Rather, these expenses were funded primarily by a General Fund appropriation from the State of Maryland. On November 12, 1980, the Systems' Board of Trustees voted to fund the administrative expenses (e.g., salaries of the Systems' employees) from investment income, effective July 1, 1981. Administrative expenses are charged to the individual systems based upon each system's percentage ownership in the Combined Equity Fund and Combined Fixed Income Funds.

c. **Actuarial Cost Methods and Assumptions**

The Retirement and Pension Systems has engaged an independent firm of consulting actuaries to prepare annual actuarial valuations and perform various actuarial consulting services. Significant changes in actuarial cost methods and assumptions during the fiscal years 1979 to 1988 are as follows:

(1) Effective for fiscal years beginning after June 30, 1979, the actuarial cost method used to determine the employees' normal and accrued liability contribution rates and the unfunded actuarial accrued liability was changed from the entry age normal cost method to the accrued benefit cost method. Effective for fiscal years beginning after June 30, 1984, the actuarial cost method was changed from the accrued benefit cost method to the entry age normal cost method.

(2) The unfunded actuarial accrued liability is based on the assumption of full funding for all benefits and on certain economic assumptions. Changes in assumptions were made for the rate of annual increases in members' salaries and wages depending on the system and the member's age, annual cost of living increase rates and the annual rate of return on investments. Effective for fiscal years beginning after June 30, 1979, the annual rate of salary and wage increases was changed from 5% to a range of 5.39% to 11.07% depending upon the system, and the annual rate of cost of living increases was changed from 4% to 5%. Effective for fiscal years beginning after June 30, 1987, the annual rate of salary increases due to inflation was changed from 5% to a range of 5% to 6%, depending upon the system, and the annual rate of salary increases due to seniority/merit was changed from a range of .39% to 6.07% to a range of .79% to 6.80%. Effective for fiscal years beginning after June 30, 1982, the assumed annual rate of cost of living increases was changed from 5% to a range of 3% to 6% depending upon the system. Effective for fiscal years beginning after June 30, 1987, the annual rate of return on investments was changed from 7% to 7.5%.

Description of the Systems

The Systems consists of the following systems which are managed by the Board of Trustees for the Systems:

Employees and Teachers Retirement Systems

a. **Organization and Purpose**

The Employees Retirement System of the State of Maryland was established on October 1, 1941 and is administered in accordance with Article 73B of the Annotated Code of Maryland for the purpose of providing retirement allowances and other benefits to State employees and the employees of participating municipal corporations. In addition, on January 1, 1980, the Employees Pension System of the State of Maryland was established. Except for State correctional officers, judges and members of the Maryland General Assembly (who become members of the Employees Retirement System), employees hired on or after January 1, 1980 become members of the Employees Pension System. Existing members of the Employees Retirement System, unless exempted by law, have the option of remaining in the Employees Retirement System or transferring to the Employees Pension System.

The Teachers Retirement System of the State of Maryland was established on August 1, 1927 and is administered in accordance with Article 73B of the Annotated Code of Maryland for the purpose of providing retirement allowances and other benefits to teachers in the State. In addition, on January 1, 1980, the Teachers Pension System of the State of Maryland was established. In this regard, teachers hired on or after January 1, 1980 become members of the Teachers Pension System, unless they elect to join an optional retirement program. Existing members of the Teachers Retirement System have the option of remaining in the Teachers Retirement System or transferring to the Teachers Pension System.

At June 30, 1988, membership in the Employees and Teachers Retirement Systems was as follows:

	Employees Retirement System	Teachers Retirement System
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	24,046	24,049
Active plan participants:		
Vested	20,986	30,832
Nonvested	1,786	6
Total	22,772	30,838

b. **Plan Benefits**

The following is a general description of the plan benefits available to the members of the Employees and Teachers Retirement Systems:

(1) Retirement Benefits:

A member may retire with full benefits after attaining the age of 60, or after completing 30 years of creditable service regardless of age. The annual retirement allowance is equal to 1/55 of a member's average final compensation (i.e., average of the member's three highest years of annual earnable compensation) multiplied by the number of years of creditable service. A member may retire with reduced benefits after completing 25 years of creditable service regardless of age.

(2) Vested Allowance:

A member terminating employment before attaining retirement age but after completing 5 years of creditable service becomes eligible for a vested retirement allowance, provided the member lives to the age of 60 and does not withdraw his or her accumulated contributions. Members terminating employment before attaining retirement age and before completing 5 years of creditable service are refunded their accumulated contributions plus earned interest.

(3) Disability and Death Benefits:

A member with 5 or more years of creditable service who becomes mentally or physically incapacitated from the further performance of duty due to other than duty connected causes is eligible to receive an ordinary disability retirement allowance. Upon retirement for ordinary disability a member shall receive a service retirement allowance if the member has attained the age of 60 or has completed thirty years of creditable service, otherwise the member shall receive an ordinary disability retirement allowance which shall be computed as 1/55 of the members' average final compensation multiplied by the number of years of creditable service but not less than one quarter of the member's average final compensation. However, the allowance shall not exceed 1/55 of the member's average final compensation multiplied by the number of years which would be creditable to the member were the member's service to continue until attainment of the age of sixty. Regardless of years of service, a member who becomes totally and permanently incapacitated from duty due to duty connected causes is eligible to receive an accidental disability retirement allowance. The annual allowance is equal to 66 2/3% of the members' average final compensation, plus an annuity which shall be the actuarial equivalent of the member's contributions at the time of retirement. However, this annual allowance cannot exceed the member's average final compensation.

Upon the death of a member in active service, the designated beneficiary(ies) will receive a lump sum payment consisting of the member's accumulated contributions with interest. In addition, if the member has one or more years of creditable service, or dies in the actual performance of duty, a death benefit equal to 100% of the member's annual earnable compensation at the time of death will be paid to the designated beneficiary(ies). Under certain conditions, the surviving spouse of a deceased member may elect to receive a monthly annuity for life instead of the lump sum payment.

(4) Adjustment of Retirement Allowance:

Members' retirement allowances are adjusted annually to provide for changes in the cost of living in accordance with prescribed formulas which are based on the change in the consumer price index.

(5) Method of Retirement Benefit Payment:

Retirement benefits are paid to retirees or beneficiaries on a monthly basis in accordance with a retirement allowance option selected by the number.

c. **Employee and Employer Contributions**

Members of the Employees and Teachers Retirement Systems are required to contribute to the Systems a fixed percentage of their regular salaries and wages (e.g., 7%). The contributions are deducted from each member's salary and wage payments and are remitted to they Systems on a regular, periodic basis.

The State of Maryland, the University of Maryland Medical System Corporation (a private, nonprofit, nonstock corporation) and 98 participating municipal corporations make all of the employer contributions to the Employees Retirement System. In addition, the State of Maryland, which is a non-employer contributor to the Teachers Retirement System, makes virtually all of the non-employee contributions to the Teachers Retirement System. All contributions to these two retirement systems are made in amounts required by State statutes.

Employees and Teachers Pension Systems

a. **Organization and Purpose**

The Employees and Teachers Pension Systems of the State of Maryland were established on January 1, 1980 and are administered in accordance with Article 73B of the Annotated Code of Maryland for the purpose of providing retirement allowances and other benefits to participants in the systems. Except for State correctional officers, judges and members of the Maryland General Assembly (who must remain in the Employees Retirement System), enrollment in the Employees Pension System is optional for employees enrolled in the Employees Retirement System. However, unless exempted by law, enrollment in the Employees Pension System is mandatory for State employees hired on or after January 1, 1980. Employees of municipal corporations, hired on or after January 1, 1980, may enroll in the Employees Pension System upon approval of the legislative body of the municipal corporation.

Teachers hired on or after January 1, 1980 will be enrolled in the Teachers Pension System, unless they elect to join an optional retirement program. Transfer to this pension system is optional for existing teachers enrolled in the Teachers Retirement System.

At June 30, 1988, membership in the Employees and Teachers Pension Systems was as follows:

	Employees Pension System	**Teachers Pension System**
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	10,842	6,967
Active plan participants:		
Vested	38,136	24,865
Nonvested	23,506	14,180
Total	61,642	39,045

b. **Plan Benefits**

The following is a general description of the plan benefits available to the members of the Employees and Teachers Pension Systems:

(1) Retirement Benefits:

A member may retire with full benefits after completing 30 years for eligibility service regardless of age, or at age 62 or older with specified years of eligibility service. On retirement from service, a member shall receive an annual service retirement allowance based on the member's average final compensation (i.e., average annual earnable compensation during any three consecutive years that provide the highest average earnable compensation) and years of creditable service with a provision for additional benefits for compensation earned in excess of the social security wage base. A member may retire with reduced benefits after attaining age 55 and completing 15 years of eligibility service.

(2) Vested Allowance:

A member terminating employment before attaining retirement age, but after completing 5 years of eligibility service, becomes eligible for a vested retirement allowance provided the member lives to age 62. Members terminating employment before attaining retirement age and before completing 5 years of eligibility service are refunded their accumulated contributions plus earned interest.

(3) Disability and Death Benefits:

A member with 5 or more years of eligibility service who becomes mentally or physically incapacitated from the further performance of duty due to other than duty connected causes is eligible to receive an ordinary disability retirement allowance. Such an allowance is based on the member's average final compensation at the time of disability and the creditable service the member would have earned if the member continued in service until the age of 62. Regardless of years of service, a member who becomes totally and permanently incapacitated from duty due to duty connected causes is eligible to receive an accidental disability retirement allowance. This annual allowance is equal to 66 2/3% of the member's average final compensation, plus an annuity which shall be the actuarial equivalent of the member's contributions at the time of retirement. However, this annual retirement allowance cannot exceed the member's average final compensation.

Upon the death of a member in active service, the designated beneficiary(ies) will receive a lump sum payment consisting of the member's accumulated contributions with interest and, if the member had one or more years of eligibility service or died in the performance of duty, a death benefit equal to 100% of the member's annual earnable compensation at the time of death. Under certain conditions the surviving spouse of a deceased member may elect to receive a monthly annuity for life instead of the lump sum payment.

(4) Adjustment of Retirement Allowance:

Members' retirement allowances are adjusted annually to provide for changes in the cost of living. However, such annual adjustments may not exceed 3% of the initial annual retirement allowance.

(5) Method of Retirement Benefit Payment:

Retirement benefits are paid to retirees or beneficiaries on a monthly basis in accordance with a retirement allowance option selected by the member.

c. **Employee and Employer Contributions**

Members of the Employees and Teachers Pension Systems are required to contribute to the Systems 5% of their regular salaries and wages which exceed the social security wage base. The contributions are deducted from each member's salary and wage payments and are remitted to the Systems on a regular, periodic basis.

The State of Maryland, the University of Maryland Medical System Corporation (a private, nonprofit, nonstock corporation) and 98 participating municipal corporations make all of the employer contributions to the Employees pension System. In addition, the State of Maryland, which is a non-employer contributor to the Teachers Pension System, makes virtually all of the non-employee contributions to the Teachers Pension System. All contributions to the pension systems are made in amounts required by State statutes.

State Police Retirement System

a. Organization and Purpose

The State Police Retirement System of the State of Maryland was established on July 1, 1949 and is administered in accordance with Article 88B of the Annotated Code of Maryland. The System provides retirement allowances and other benefits to any officer or employee of the Maryland State Police, except employees who become members of the Employees' Retirement System or the Employees' Pension System.

At June 30, 1988, membership in the State Police Retirement System was as follows:

(1) Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	628
Active plan participants:	
Vested	672
Nonvested	966
Total	1,638

b. **Plan Benefits**

The following is a general description of the plan benefits available to members of the State Police Retirement System.

(1) Retirement Benefits:

A member of the State Police Retirement System may retire with full benefits after attaining age 50, or after completing 25 years of creditable service regardless of age. The annual retirement allowance is equal to 1/45 of a member's average final compensation (i.e., average of the employee's three highest years of annual earnable compensation) multiplied by the member's first 25 years of creditable service, plus 1/90 of the average final compensation multiplied by the member's creditable years after the first 25 years of creditable service.

(2) Vested Allowance:

A member terminating employment prior to retirement after completing at least 15 years of creditable service, becomes eligible for a vested retirement allowance provided the member lives to age 50 and does not withdraw his or her accumulated contributions. Members terminating employment prior to retirement and before completing at least 15 years of creditable service are refunded their accumulated contributions plus earned interest.

(3) Disability and Death Benefits:

A member with 5 or more years of creditable service who becomes mentally or physically incapacitated from the further performance of duty due to other than duty connected causes is eligible to receive an ordinary disability retirement allowance. The annual allowance is based on the member's years of creditable service and average final compensation at the time of disability, with a guarantee that the annual allowance will be at least 35% of the members average final compensation. Regardless of years of service, a member who becomes totally and permanently incapacitated from duty due to duty connected causes is eligible to receive a special disability retirement allowance. The annual allowance is equal to 66 2/3% of the member's average final compensation, plus an annuity which shall be the actuarial equivalent of the member's contributions at the time of retirement. However, this annual allowance cannot exceed the member's average final compensation.

Upon the death of a member in active service, the designated beneficiary(ies) will receive a lump sum payment which consists of the member's accumulated contributions with interest and, if the member had one through two years of creditable service, an ordinary death benefit equal to 100% of the member's annual earnable compensation at the time of death. If the deceased member had more than two years creditable service, or died in the performance of duty, a special death benefit is paid to the member's beneficiary(ies). The benefit consists of a lump sum payment of the member's accumulated contributions with interest at the time of death and an annual pension equal to 50% of the member's average final compensation at the time of death.

(4) Adjustment of Retirement Allowance:

Members' retirement allowances are adjusted annually to provide for changes in the cost of living as reflected by the consumer price index.

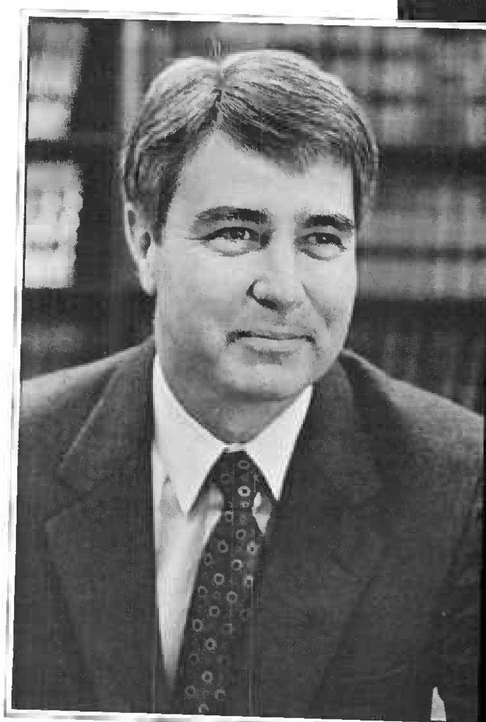
(5) Method of Retirement Benefit Payment:

Retirement benefits are paid to retirees or beneficiaries on a monthly basis in accordance with a retirement allowance option selected by the member.

c. **Employee and Employer Contributions**

Members of the State Police Retirement System are required to contribute 8% of their regular salaries and wages to the System. The contributions are deducted from each member's salary and wage payments and are remitted to the Systems on a regular, periodic basis.

The State of Maryland makes all of the employer contributions to the State Police Retirement System in amounts required by State statutes.



Col. Elmer H. Tippett, Ex-officio member of the Board, is Superintendent of State Police and serves on the Executive Committee.

MARYLAND STATE RETIREMENT AGENCY

HOWARD J. FRANCE
CHIEF INVESTMENT OFFICER

301 WEST PRESTON STREET
BALTIMORE, MARYLAND 21201-2363
TELEPHONE (301) 225-1020

Chief Investment Officer's Report

Despite a dramatic decline in common stock prices during October of 1987, the investment program of the Maryland State Retirement and Pension Systems recorded a fourth consecutive year of positive performance during the 1988 fiscal year. Details of the Systems' investment results are shown on page 34 of the Comprehensive Annual Financial Report.

The total rate of return for fiscal year 1988 was 7.7%, reflecting both income from securities and capital appreciation.

In September of 1987, the Board of Trustees of the Systems authorized the establishment of a $3.9 billion dedicated bond fund designed to ensure all future benefits payable to retirees and beneficiaries who were in receipt of payments on June 30, 1987. The new portfolio will yield just over 10%. Interest income plus cash generated as bonds mature will very closely match projected monthly benefit payments for the next 40 years.

Concurrently, the Systems sold common stocks valued at $2.3 billion reducing the Systems' equity exposure from approximately 62% to just over 30% of total invested assets. This action preserved a major portion of the accumulated profits the Systems enjoyed during the immediately preceding four years, a period of surging common stock prices.

By the end of fiscal 1988, Systems' assets were deployed as follows:

(In Millions)	June 30, 1988 Market Value	Percent To Total
FIXED INCOME SECURITIES		
Government Obligations	$3,366.6	37.9%
Corporate Bonds	1,846.9	20.8
Mortgages and Mortgage-Backed Securities	179.9	2.0
	5,393.4	60.7
Common Stocks	2,576.4	29.0
Real Estate (Pooled Funds)	183.2	2.1
Cash and Equivalents	731.6	8.2
	$8,884.6	100.0%

For the past five fiscal years, the annualized total return of the Systems' investment program has been 15.0%. Inflation during the same period, as measured by changes in the Consumer Price Index, has been equivalent to a compound rate of 3.5%. The resulting "real" rate of return (inflation adjusted) is 11.5% and exceeds by a wide margin the intermediate term objectives of the Board of Trustees, that is a real rate of return of at least 2.5%.

The outstanding performance of the investment program has been largely due to heavy emphasis placed on common stocks from 1979 until September, 1987. The Systems' equity exposure ranged from a low of 39.3% in 1979 to a high of 62.0% in August of 1987. The favorable results of the equity portion of System assets were further enhanced by the superior returns of the Combined Equity Fund relative to the outside world. The total return of the Fund for the five years 1984 through 1988 was 15.5% as compared to a return in the market place of 14.5% (using the S & P 500 as a bench mark).

On the fixed income side, the Systems' Combined Fixed Income Fund produced a compound average return of 11.4%, just under that of Salomon Brothers Broad Investment Grade Index which averaged 12.6%.

For the eight and one half months of its existence, the new Dedicated Bond Fund generated returns well in excess of its targeted 10.4% as interest rates in general declined somewhat. The Systems' real estate investments, initiated in 1987, have returned approximately 8.0% during the last two fiscal years. The Systems expect to continue to expand in the real estate area over the next ten years.

Respectfully submitted,

Howard J. France

Howard J. France, Chief Investment Officer
Maryland State Retirement and Pension Systems

December 12, 1988

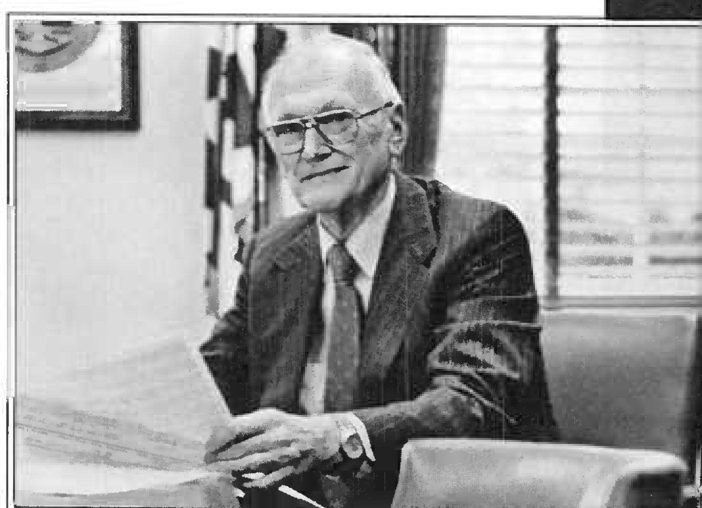
History of Investment Results

For the year ended June 30,

(In Millions) Total Investment	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979
Market Value Beginning of year	$8,062.7	$6,778.1	$5,133.1	$3,875.6	$3,806.9	$2,616.8	$2,546.7	$2,312.6	$2,156.3	$1,854.2
Employer and Employee Contributions	683.3	644.6	622.7	570.0	537.9	440.4	389.0	373.4	321.9	319.7
Benefit and Expense Payments	(486.8)	(462.2)	(430.1)	(438.4)	(374.8)	(333.1)	(294.3)	(240.4)	(337.1)	(179.8)
Net Cash Flow	196.5	182.4	192.6	131.6	163.1	107.3	94.7	133.0	(15.2)	139.9
Investment Income	563.1	366.3	355.4	329.1	284.8	272.5	239.1	204.4	166.0	140.0
Realized Capital Gain (Loss)	1,214.9	363.8	326.5	92.9	(89.2)	(22.3)	34.9	(51.7)	(16.6)	(13.7)
Change in Unrealized Capital Gain (Loss)	(1,152.6)	372.1	770.5	703.9	(290.0)	832.6	(298.6)	(51.6)	22.1	35.9
Total Investment Result	625.4	1,102.2	1,452.4	1,125.9	(94.4)	1,082.8	(24.6)	101.1	171.5	162.2
Market Value End of Year	$8,884.6	$8,062.7	$6,778.1	$5,133.1	$3,875.6	$3,806.9	$2,616.8	$2,546.7	$2,312.6	$2,156.3
Annual Rate of: Total Investment Result	7.7%	16.0%	27.8%	28.6%	—2.4%	40.5%	—0.9%	4.2%	8.0%	8.4%
Investment Income plus Realized Capital Gain	23.4%	10.3%	12.1%	9.8%	5.2%	8.1%	11.2%	6.5%	6.9%	6.5%

Statistical Section

Charles L. Benton, Ex-officio member of the Board, is Secretary of Budget and Fiscal Planning and serves on the Executive Committee.



Summary of Membership Data

	Total	Teachers Retirement	Teachers Pension
As of June 30, 1988			
Active Members			
Females	98,524	20,652	31,040
Males	57,411	10,186	8,005
Total	155,935	30,838	39,045
Average Annual Salary			
Females	$22, 939	$31,634	$22,901
Males	27,223	40,936	30,887
Retired Members			
Females	28,352	15,207	375
Males	18,569	6,110	156
Total	46,921	21,317	531
Average Annual Retirement Allowances			
Females	$ 8,957	$11,996	$ 3,695
Males	10,921	16,188	5,878
Vested Former Members			
Females	12,838	1,866	4,832
Males	6,773	866	1,604
Total	19,611	2,732	6,436

Employees Retirement	Employees Pension	State Police	Judges
10,432	36,268	102	30
12,089	25,374	1,536	221
22,521	61,642	1,638	251
$20,299	$18,745	$23,038	$64,469
21,399	22,905	28,204	70,003
11,661	1,028	57	24
10,554	1,018	563	168
22,215	2,046	620	192
$ 5,678	$ 2,434	$16,649	$20,584
7,948	3,155	17,538	35,690
994	5,145	0	1
632	3,651	8	12
1,626	8,796	8	13

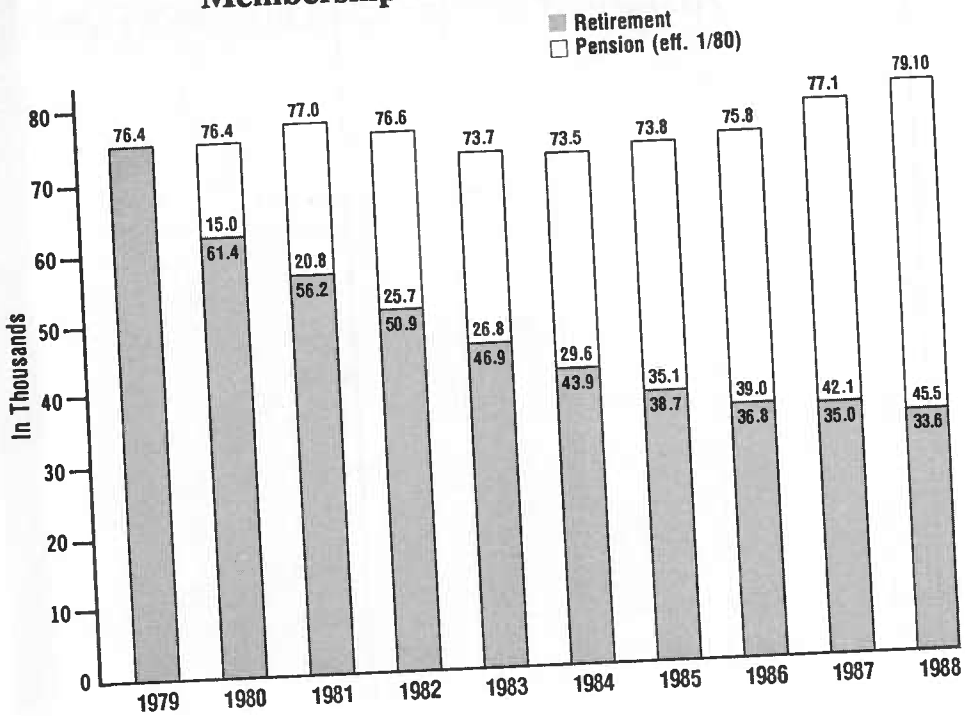
Ten Year History of Membership Data by System

June 30,	Total All Systems	Teachers Retirement	Teachers Pension	Employees Retirement*	Employees Pension	State Police Retirement
1988	175,546	33,570	45,481	24,411	70,438	1,646
1987	170,612	35,037	42,125	25,573	66,289	1,588
1986	166,706	36,800	38,970	26,912	62,502	1,522
1985	161,226	38,737	35,108	28,635	57,227	1,519
1984	162,739	43,893	29,606	32,722	54,976	1,542
1983	161,427	46,926	26,816	35,655	50,467	1,563
1982	165,206	50,938	25,664	39,916	47,158	1,530
1981	161,849	56,241	20,768	45,665	37,635	1,540
1980	158,284	61,428	14,998	51,499	28,810	1,549
1979	155,389	76,395		77,458		1,536

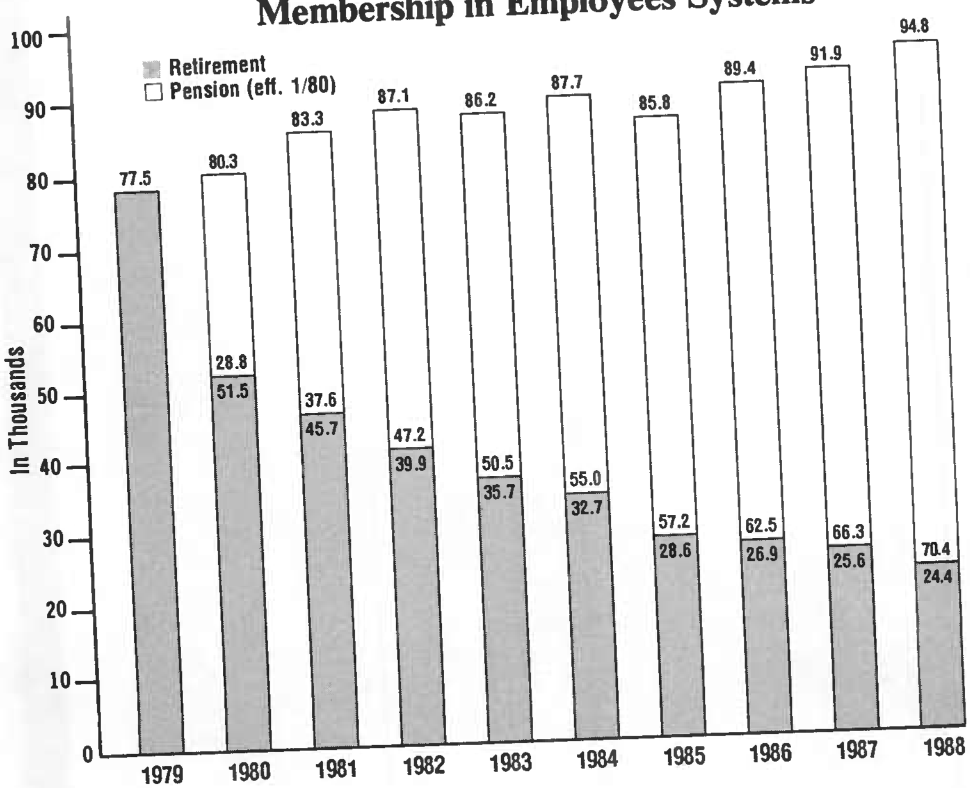
* Includes Judicial Plan and Legislative Plan members.

Hilda E. Ford, Ex-officio member of the Board, is Secretary of Personnel and serves on the Executive Committee.

Membership in Teachers Systems



Membership in Employees Systems

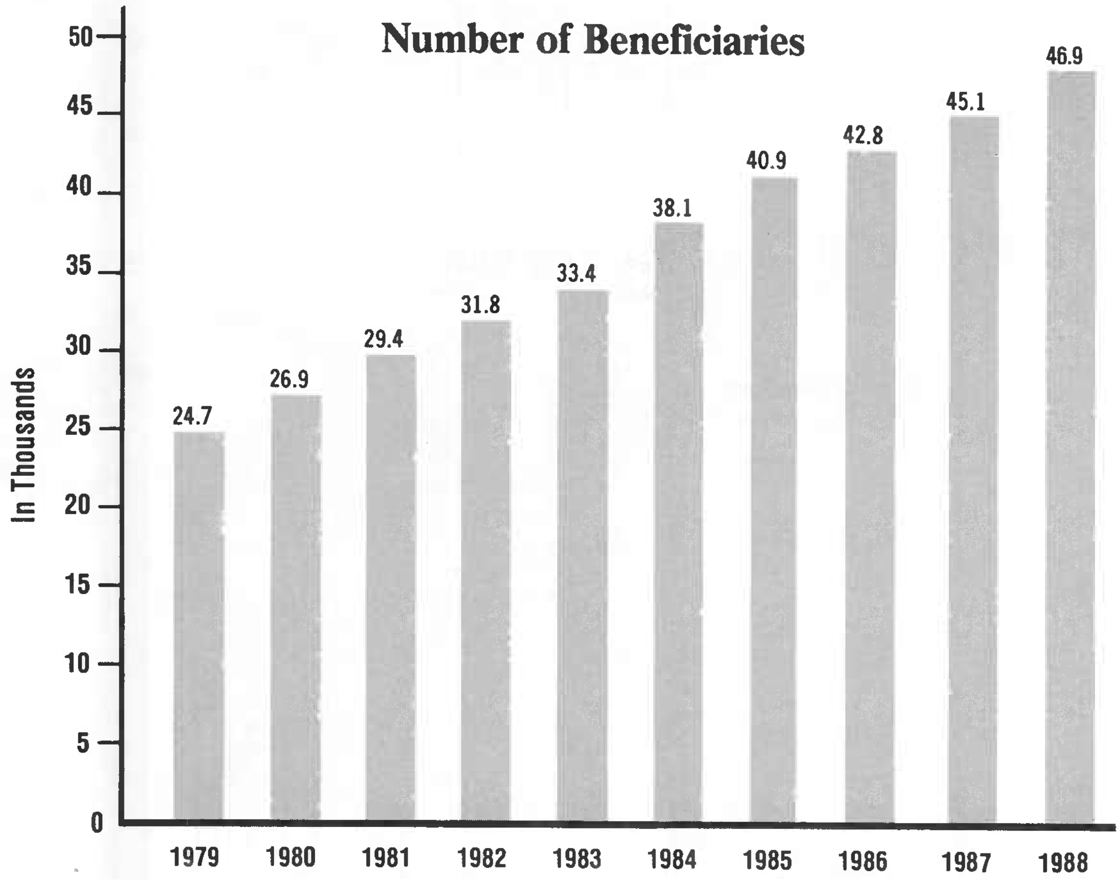


Ten Year History of Beneficiary Data by System

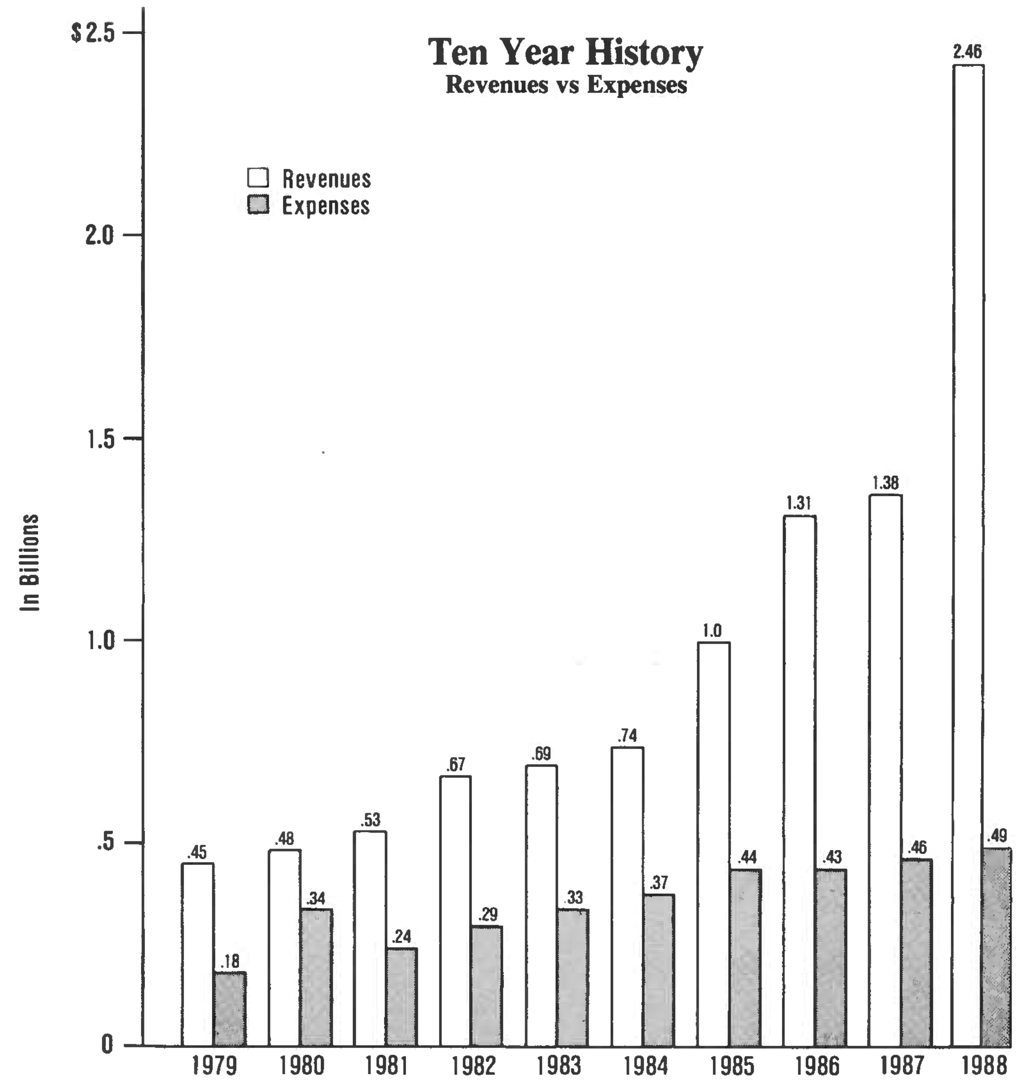
June 30,	Total All Systems	Teachers Retirement	Teachers Pension	Employees Retirement*	Employees Pension	State Police Retirement
1988	46,921	21,317	531	22,407	2,046	620
1987	45,089	20,726	430	21,751	1,606	576
1986	42,756	19,806	323	20,885	1,205	537
1985	40,850	19,027	220	20,226	894	483
1984	38,062	17,724	153	19,132	625	428
1983	33,411	16,129	98	16,422	393	369
1982	31,762	15,188	44	15,960	231	339
1981	29,409	14,174	24	14,824	101	286
1980	26,921	13,111		13,561		249
1979	24,706	12,143		12,347		216

* Includes Judicial Plan and Legislative Plan annuitants.

Malcolm S. Barlow is a beneficiary of the Employees Retirement System and is a member of the Executive Committee.



Lt. Col. James A. Jones, appointed by the Board of Public Works, is a member of the State Police Retirement System and serves on the Executive Committee.



Ten Year History
Revenues vs Expenses
Revenues
Expenses
$2.5
2.0
1.5
1.0
.5
0
In Billions
.45
.18
.48
.34
.53
.24
.67
.29
.69
.33
.74
.37
1.0
.44
1.31
.43
1.38
.46
2.46
.49
1979
1980
1981
1982
1983
1984
1985
1986
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